



## Warranty Information

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- Conestoga Wood Specialties Corporation warrants that, for a period of one year from date of shipment, our products will be reasonably free of defects in materials and workmanship. When properly handled, our products will conform, within acceptable tolerances, to applicable manufacturing specifications. This limited warranty applies only to Conestoga products which are stored, handled, and installed in the manner recommended in this product manual. Conestoga will not be responsible or liable for any indirect, consequential or incidental damages sustained by the user.
- Conestoga's warranty is limited solely to the value of the original materials purchased from Conestoga and is further limited in amount to the purchase price paid for such materials. Conestoga will not be liable for the cost of extraneous materials, labor, travel costs, installation expenses or other related expenditures.
- Natural characteristics in the wood (burls, grain patterns, pin knots, mineral deposits, sap, etc.) that fall within Conestoga's specifications will not be considered defects.
- Conestoga will not be liable for damages to products caused by improper handling, storage, assembling, finishing or installation by the customer. Our products are not warranted against expansion occurring as a result of high moisture or humidity conditions.
- Conestoga's finished products carry a one year warranty against peeling, blistering, fading, or cracking, but no warranty against discoloration. Conestoga assumes no responsibility for damages or poor color match when finish is applied by the customer.
- Some species, particularly Cherry and Eucalyptus will darken naturally with age. Conestoga is not liable for the change in appearance of any product, finished or unfinished, due to this aging process. Results of aging will be more obvious when using clear, light or glazed finishes.
- Mitered doors allow a .010" joint gap 1" from the inside bead.
- Mitered doors are not warranted against joint separations that occur as a result of high humidity or moisture conditions. Painted finishes are not recommended on mitered designs.
- Veneered panel doors are not guaranteed to match solid wood framing on the same door. Veneer will absorb stain differently than solid wood. The mismatch of solid and veneers is not considered defective.
- Solid wood moulding color may differ from doors of the same specie.
- Single panel, five-piece doors and drawer fronts over 26" wide or 48" high are not warranted for warpage or cracking of panels or framing joints.
- Allowable tolerances against expansion, warpage or cracking of panels is 1/8" up to 12" wide and 24" high. Allowable tolerance is 1/4" for one-piece products from 12 1/16" wide by 24 1/16" high up to 24" wide to 36" high. All one-piece solid wood products over 24" wide and 36" long are not warranted against expansion, warpage or cracking of panels.
- All three-piece drawer fronts over 30" wide and 14" high are not warranted against expansion, warpage, cracking of panels or cracked joints.
- Conestoga expressly disclaims any and all other warranties, whether expressed or implied, including all warranties of merchantability and warranties of fitness for a particular purpose with respect to its products.



## *Size Specifications*

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- A minimum size dimension is listed for each product. When ordering, one of the minimums must be exceeded by at least 3". For example, if a door minimum is listed at 10" x 10", the door must be ordered as either 10" x 13" or 13" x 10". A door ordered under the minimum listed will incur an \$18.44 list charge. Any raised panel product requiring a panel size of less than 3" x 3" will be manufactured using 1/4" plywood. Our minimums are designed to protect our employees by making sure there is always enough material to run through a given piece of equipment.
- If a door is ordered under the stated minimum, Conestoga can cut the framing down, and a cut-down charge will be incurred. For pricing see the Design Options section. Up to 1" of material may be trimmed from each stile and 3/4" trimmed from each rail, depending on design. Miter doors will not be cut down.
- Conestoga measures all door framing by its full width. When specifying wider framing, be sure to provide full framing width calculations including edge profile and framing bead.
- When calculating material costs, there is a one square foot minimum on doors only.
- With the exception of mitered products, 10SQ1, 10SQ2, Madison and Presidential mortise and tenon series, doors ordered over 26" wide or 48" high will be made with two panels unless specified otherwise by the customer. One panel will be added for every 26" wide or 48" high. For example, a door measuring 27" x 49" will receive four panels. Conestoga will not warranty oversize single panel doors against warpage that will develop. Miter, 10SQ1, 10SQ2, Madison and Presidential doors will be made with one panel regardless of size unless specified by the customer. Call your Customer Service Representative for pricing on multiple panel miter, Presidential or Madison designs.
- Unless otherwise specified by the customer, lower panels on most multiple panel doors will be made with a square panel regardless of the design ordered. Exceptions include doors with matching top and bottom rails, such as a CRP-2020.
- Conestoga manufactures its products to the nearest 1/16". A tolerance of +/- 1/32" is considered acceptable.

## *Warpage Tolerances*

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- Allowable tolerance for warpage for five piece doors is 1/8" up to 26" wide and 48" high. Allowable tolerance is 1/4" for doors that exceed either of these dimensions.
- Mitered doors greater than the above stated limits will void all warranties unless ordered as a multiple panel door. Multiple panel miter doors will incur extra charges and time to manufacture. Call your Customer Service Representative for details.
- Conestoga will warrant one piece products against expansion, warpage or cracking if they are within the following parameters:
  - If the product is less than 12" wide and 22" high, it will be warranted if the expansion or warpage is greater than 1/8".
  - If the product measures between 12-1/16" to 22" in width, or 22-1/16" to 44" in height, it will be warranted if the expansion or warpage is greater than 1/4".
- All three-piece products over 30" wide and 14" high are not warranted against warpage.



## *Mullion and Frame Only Door Specifications*

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- Mullion and frame only doors ordered with our #52 retainer molding require that the moulding and framing be pre-drilled to avoid cracking.
- The visual appeal of any Quarter Circle mullion door is greatly affected by the number of lites. To help determine the ideal number of lites, refer to the chart on Quarter Circle doors in the Wood Doors and Drawer Front section.
- All custom mullion doors are constructed using wooden splines at each mullion joint.
- When ordering any mullion door design, always specify the number of lites desired.

## *Effects of Moisture in Wood*

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- Any solid wood product will expand or contract over time as moisture and climate conditions change. Miter doors need low, stable moisture conditions in order for the joints to remain tight.
- Effects of moisture (addition to/loss of) may include panel expansion, panel contraction, joint expansion or opening (especially on miter doors), stile bowing and stile/rail expansion. Contraction of finished panels may also produce an effect called *white line*, in which a narrow strip of unfinished wood becomes visible at the point where the panel inserts into the framing. Conestoga has specifications on most of these conditions. For details on what is considered acceptable, refer to the following pages.
- Wood products located in humid climates are especially susceptible to expansion due to moisture. Conestoga will not warrant product failure caused by excessively humid conditions. Such locations include waterfront properties and coastal regions.
- Cabinetry installed in new construction prior to climate control being activated will result in absorption of moisture from other building materials. These materials can include paints, dry wall compound, cement, stucco and wood framing material with high moisture content. Each of these construction materials releases high amounts of moisture into the home during the drying/curing process.
- Wood products installed in non-air conditioned homes, regardless of location, are very susceptible to expansion due to moisture and may not be warranted. All products, especially miter doors, need low, stable moisture conditions in order for the joints to remain tight. Refer to the Expansion due to Moisture chart in this section.
- Marine applications such as nautical vessels are considered to be in high humidity conditions regardless of any resident climate control system.
- To minimize moisture expansion of wood products, winter and vacation homes should maintain some form of climate control, even in off season. Conestoga will not warranty products installed in uncontrolled environments.

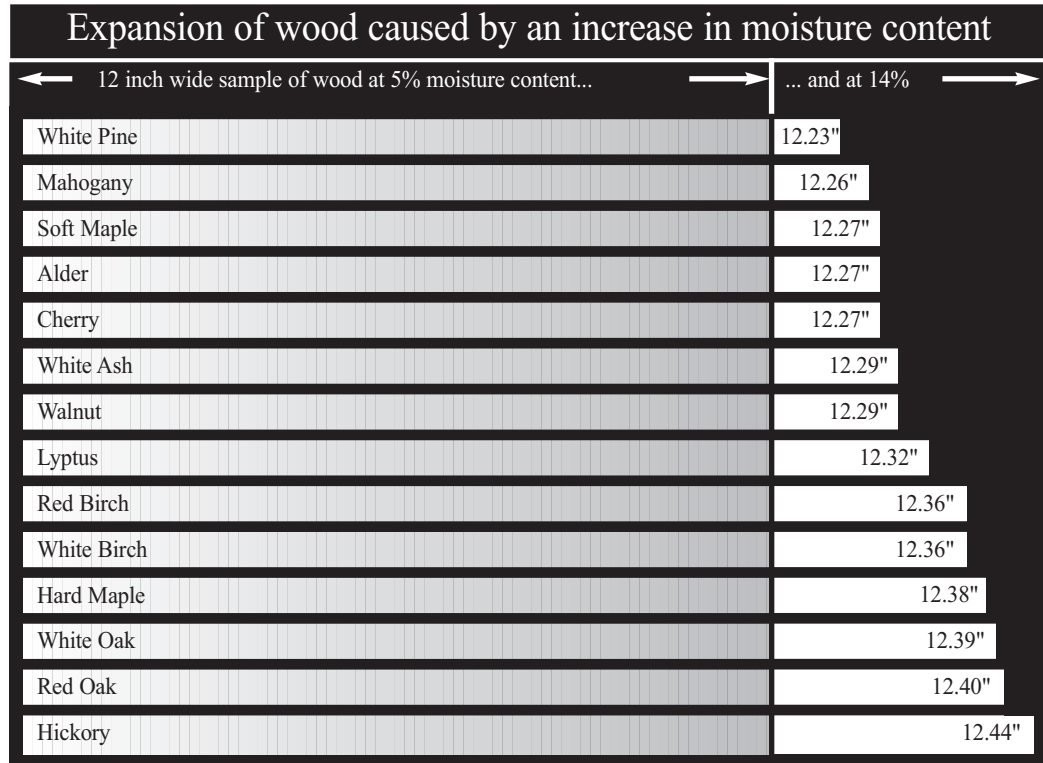


## *Tips for Avoiding Moisture-related Problems*

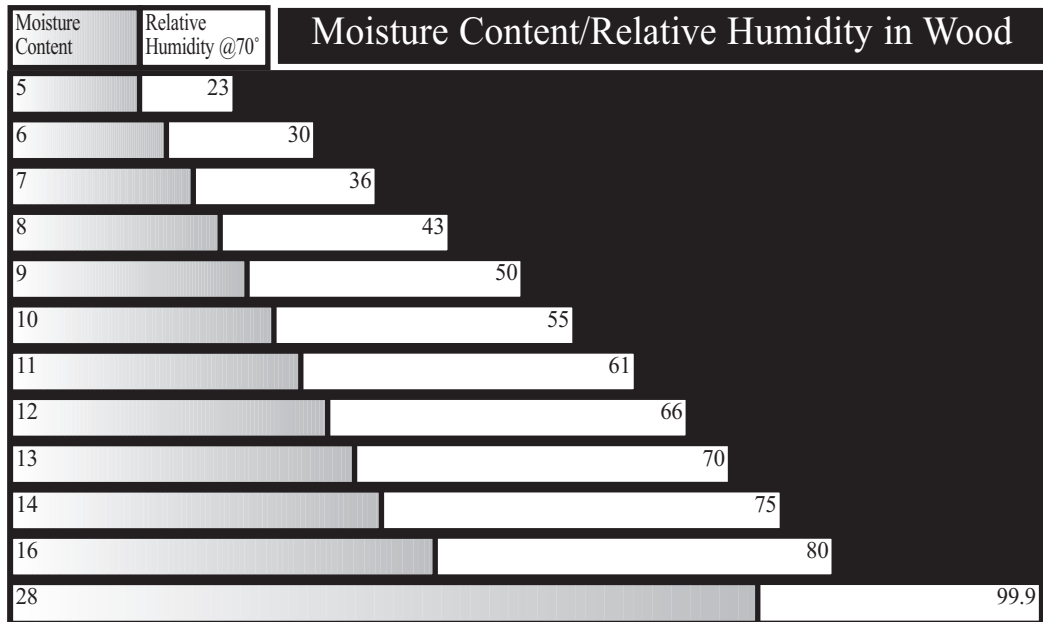
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- All species, especially Hard Maple, tend to expand when exposed to moisture. For details on how species are affected by moisture, refer to the Expansion due to Moisture chart in this section.
- Many of Conestoga's products possess miter joint applications beyond the listed miter door offering. Examples include Presidential doors and applied moulding doors. Consult your Sales or Customer Service Representative before purchasing any of these products for use in high humidity environments.
- Door expansion experienced prior to installation on the cabinet box will usually recede once the kitchen has been installed in an air conditioned environment. For this reason, we do not recommend trimming or "shaving" the edges of the doors, because once they return to original sizing, the doors may appear too narrow. Conestoga will not warrant doors that have been trimmed by the customer.
- Unfinished doors exposed to humid conditions will absorb moisture rapidly and expand in as little as 2 days. Finished products will also absorb moisture, but may not expand for as long as 10 days. Be aware of these conditions when storing, installing or finishing products.
- Always go to extra lengths to ensure that all wood products are being stored in the proper environment. Conestoga will assume no responsibility for improper storage, handling, packaging, finishing or installation of its products in high moisture/humidity conditions.
- Doors that have been exposed to high moisture conditions and then finished by the customer have an increased chance of white lines developing around the panels after the doors have contracted to their original size. We recommend doors be finished in their non-expanded state as soon after delivery as possible.
- Conestoga doors are engineered with a back bevel on all our framing beads. This back bevel allows stains to penetrate the panel raise/framing bead area, helping to reduce or eliminate white line.
- Conestoga's miter doors feature one of the most durable joint construction methods available. However, panel expansion in high humidity climates will put pressure on any joint, regardless of construction. Therefore, we strongly urge the ordering of plywood panel doors to help reduce panel expansion, if the kitchen will be in either a high humidity or non-climate controlled location. Please note, however, that even a plywood panel will not inhibit wood movement in the door framing.
- The wider the framing, the greater the chance that the miter joint will expand.
- Inset doors will most likely bind inside the cabinet frame when their panels expand.
- Allow room for expansion when boring for hinges. Hinges must be placed at least 3/4" away from the framing bead. Conestoga will not be liable for improperly bored products.
- Joint failure will result if panels are glued, pinned, stapled or secured to the framing on any wood door. Conestoga will not be held liable in these instances.

## Expansion due to Moisture



The graph above indicates how much a 12" wide panel of various species can expand as a result of an increase in moisture content from 5% to 14%. For instance, the chart reveals that a Red Oak panel 12" wide could expand by more than 3/8".



### How moisture levels effect movement in wood

Wood is a hygroscopic material, meaning that it will absorb or release moisture until it is in equilibrium with the moisture in the air. This is true of all wood, whether it is raw or finished. Finishing will tend to slow down this process, but will not eliminate it. When wood is exposed to a constant humidity, it will achieve a constant moisture content (MC). This MC numerical value is called the equilibrium moisture content (EMC). Wood will increase in width and thickness as it increases in MC, and will decrease in width and thickness as it decreases in MC. The above chart shows how the moisture content of wood increases with an increase in relative humidity.

Conestoga manufactures its products to an EMC of approximately 7%, a level typical in climate-controlled homes.